WHAT IS CLAIMED IS:

1. An end-surface reflection type surface acoustic wave filter comprising:

a piezoelectric substrate including first and second reflection end-surfaces disposed substantially parallel to each other and spaced from each other by a predetermined distance, a top surface, a bottom surface, first and second piezoelectric substrate portions which extend from bottom ends of the first and the second reflection end-surfaces to outside of the filter, and first and second grooves or first and second recess portions open to the outside of the filter, the first and the second reflection end-surfaces and the first and the second piezoelectric substrate portions defining the first and the second grooves or the first and the second recess portions, respectively;

a plurality of interdigital transducers disposed on the top surface of the piezoelectric substrate between the first and the second grooves or between the first and the second recess portions; and

a resin-coating layer which is provided on the top surface of the piezoelectric substrate so as to cover at least said plurality of interdigital transducers and regions at which the first and the second grooves or the first and the second recess portions are located and which includes a flexible resin;

wherein the resin-coating layer partially intrudes into at least one of the first and the second grooves or at least one of the first and the second recess portions.

2. An end-surface reflection type surface acoustic wave filter comprising:

a piezoelectric substrate including first and second reflection end-surfaces disposed substantially parallel to each other and spaced from each other by a predetermined distance, a top surface, a bottom surface, first and second piezoelectric substrate portions which extend from bottom ends of the first and the second reflection end-surfaces to outside of the filter, and first and second grooves or first and second recess portions open to the outside, the first and the second reflection end-surfaces and the first and the second piezoelectric substrate portions defining the first and the second grooves or the first and the second recess portions, respectively;

a plurality of interdigital transducers disposed on the top surface of the piezoelectric substrate between the first and the second grooves or between the first and the second recess portions; and

a resin-coating layer which is provided on the top surface of the piezoelectric substrate so as to cover at least said plurality of interdigital transducers and regions at which the first and the second grooves or the first and the second recess portions are located and which includes a flexible resin;

wherein the resin-coating layer is arranged so as to cover approximately 20% or greater of an area of the top surface of the piezoelectric substrate where said plurality of interdigital transducers are located.

3. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the flexible resin has a Shore hardness of about 30 or less.

4. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the flexible resin is a gel resin.

5. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the flexible resin has a density of about 1.2 g/cm^3 or less after being cured.

6. An end-surface reflection type surface acoustic wave filter according to Claim 5, wherein the flexible resin has a density of about 1.0 g/cm^3 or less after being cured.

7. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the flexible resin has a Young's modulus of about 1 MPa or less after being cured.

8. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the flexible resin has a linear expansion coefficient of about 1.9×10^{-4} (1/°C) or greater after being cured.

9. An end-surface reflection type surface acoustic wave filter according to Claim 8, wherein the flexible resin has a linear expansion coefficient of about 2.3×10^{-4} (1/°C) or greater after being cured.

10. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the flexible resin is a gel resin, and after being cured, the flexible resin has a

density of about 1.0 g/cm^3 or less, a Young's modulus of about 1 MPa or less, and a linear expansion coefficient of about 2.3×10^{-4} (1/°C) or greater.

11. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the flexible resin is one of a silicone rubber, an epoxy resin, and a urethane rubber.

12. An end-surface reflection type surface acoustic wave filter according to Claim 11, wherein the flexible resin is a silicone rubber.

13. An end-surface reflection type surface acoustic wave filter comprising:

a piezoelectric substrate including first and second reflection end-surfaces disposed substantially parallel to each other and spaced from each other by a predetermined distance, a top surface, a bottom surface, first and second piezoelectric substrate portions which extend from bottom ends of the first and the second reflection end-surfaces to outside of the filter, and first and second grooves or first and second recess portions open to the outside of the filter, the first and the second reflection end-surfaces and the first and the second piezoelectric substrate portions defining the first and the second grooves or the first and the second recess portions, respectively;

a plurality of interdigital transducers disposed on the top surface of the piezoelectric substrate between the first and the second grooves or between the first and the second recess portions; and

a layer which includes SiO_2 and is arranged so as to cover said plurality of interdigital transducers.

14. An end-surface reflection type surface acoustic wave filter according to Claim 13, wherein, when a wavelength of a surface acoustic wave which is to be used is represented by λ, and an electrode thickness of the interdigital transducer is represented by H, $H/\lambda \leq 0.06$ is satisfied.

15. An end-surface reflection type surface acoustic wave filter according to Claim 13, wherein, when a wavelength of a surface acoustic wave which is to be used is represented by λ, and an electrode thickness of the interdigital transducer is represented by

H, $H/\lambda \leq 0.045$ is satisfied.

16. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein each of the grooves or each of the recess portions has a depth that is substantially equal to or greater than a wavelength of an SH type surface acoustic wave which is to be used.

17. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the end-surface reflection type surface acoustic wave filter is a ladder type filter which includes an end-surface reflection resonator.

18. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the end-surface reflection type surface acoustic wave filter is a longitudinally coupled resonator filter.

19. An end-surface reflection type surface acoustic wave filter according to Claim 1, wherein the end-surface reflection type surface acoustic wave filter is a transversely coupled resonator filter.